

Name: \_\_\_\_\_

**at1110paper\_\_practice\_\_test (v114)**

1. Solve the equation.

$$(5x + 6)(7x - 8) = 0$$

$$x = \frac{-6}{5} \quad x = \frac{8}{7}$$

2. Solve the equation.

$$9x^2 + 9x = 2x^2 - 3x - 5$$

$$\begin{aligned} 7x^2 + 12x + 5 &= 0 \\ (7x + 5)(x + 1) &= 0 \\ x = \frac{-5}{7} \quad x &= -1 \end{aligned}$$

3. Expand the following expression into standard form.

$$(8x - 7)(6x - 5)$$

$$\begin{aligned} 48x^2 - 40x - 42x + 35 \\ 48x^2 - 82x + 35 \end{aligned}$$

4. Expand the following expression into standard form.

$$(3x + 4)(3x - 4)$$

$$\begin{aligned} 9x^2 - 12x + 12x - 16 \\ 9x^2 - 16 \end{aligned}$$

5. Factor the expression.

$$64x^2 - 25$$

$$(8x - 5)(8x + 5)$$

6. Factor the expression.

$$x^2 + 4x - 21$$

$$(x - 3)(x + 7)$$

7. Solve the equation with factoring by grouping.

$$24x^2 - 20x + 18x - 15 = 0$$

$$(4x + 3)(6x - 5) = 0$$

$$x = \frac{-3}{4} \quad x = \frac{5}{6}$$

8. Expand the following expression into standard form.

$$(3x + 5)^2$$

$$9x^2 + 15x + 15x + 25$$

$$9x^2 + 30x + 25$$